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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/506,482

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Mats Sagfors

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ERICSSON INC.
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EXAMINER

BRANDT, CHRISTOPHER M

ART UNIT

PAPER NUMBER

2617

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/506,482	Applicant(s) SAGFORS, MATS	
	Examiner CHRISTOPHER M. BRANDT	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This Action is in response to applicant's amendment filed on August 29, 2008. **Claims 44-67** are still currently pending in the present application.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Response to Arguments

Applicant's arguments with respect to claims 44-67 have been considered but are moot in view of the new ground(s) of rejection.

The examiner notes that Ameigeiras is related to load control because Ameigeiras discusses load congestion relating to the transport protocol (see paragraphs 7, 15). In addition, once the receiver receives data it sends an acknowledgment back to the sender to avoid multiple transmission, therefore, avoiding load congestion (see paragraphs 19, 20).

The examiner also notes that although Rautiola discloses a radio resource management located in the mobile unit, it would not be novel to place this particular feature in the radio resource management entity. Nonetheless, the examiner provides applicant's with this feature by using Applicant's Admitted Prior Art. See the rejection below.

As a result, the claims are written such that they read upon the cited references.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 44-49, 53-67 are rejected under 35 USC 103(a) as being unpatentable over **Ameigeiras et al. (US PG PUB 2004/0052234 A1, hereinafter Ameigeiras)** in view of **Rautiola et al. (US Patent 6,853,851 B1, hereinafter Rautiola)** in view of **Aweya (US Patent 7,047,312 B1)** and further in view of **Applicant's Admitted Prior Art (hereinafter AAPA)**.

Consider **claim 44 (and similarly applied to claims 47, 53, 55, and 61)**. Ameigeiras discloses a method of load control between a transport protocol sender and transport protocol receiver in a radio communication system (abstract), the method comprising the step of:

transferring to said transport protocol receive one or more signals carrying data from a radio resource management entity of a radio network control node intermediate to said transport protocol sender and said transport protocol receiver, said transport protocol receiver using said data to dynamically adapt transport protocol load (figure 1, paragraph 15, read as a TCP sender that sends data to a user equipment through a radio network controller).

Ameigeiras discloses the claimed invention but fails to explicitly teach that this data is radio resource data.

However, Rautiola discloses radio resource data (figure, column 12 lines 19-58, read as a radio resource manager is also provided for a user terminal for transmitting radio resource data between the mobile unit and the user terminal).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Rautiola into the invention of Ameigeiras in order to allow a system to transfer information between a mobile station and a further communication device (column 3 line 66 – column 4 line 11).

In addition, Ameigeiras and Rautiola fail to explicitly teach dynamically adapted transport protocol load to link state information between the transport protocol sender and the transport protocol receiver.

However, Aweya teaches dynamically adapted transport protocol load to link state information between the transport protocol sender and the transport protocol receiver (column 6 lines 9-29, read as controlling congestion by modifying at an intermediate network element, the receiver's advertised window in TCP acknowledgments returning to the sources. A critical parameter in the window control scheme is determining the optimal network device's advertised window size per connection).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Aweya into the invention of Ameigeiras and Rautiola in order to eliminate buffer underflow and overflow as much as possible (column 6 lines 28-29).

Moreover, Ameigeiras, Rautiola, and Aweya fail to explicitly teach that the radio resource management entity is located in a radio network control node.

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However, AAPA teaches that the radio resource management entity is located in a radio network control node (page 4 lines 26-28 of present application, read as a radio network controller, RNC, is understood as a network element including an RRM (Radio Resource Management) entity).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of AAPA into the invention of Ameigeiras, Rautiola, and Aweya in order to be able to dynamically adapted transport protocol load to link state information at either the mobile unit (like Rautiola) or at the radio network controller.

Consider **claim 45 and as applied to claim 44 (and similarly applied to claims 54 and 62)**. Ameigeiras and Rautiola disclose wherein the radio resource management entity is a radio network controller (Ameigeiras; figure 1, paragraph 15).

Consider **claim 46 and as applied to claim 45**. Ameigeiras and Rautiola disclose wherein the radio network controller controls radio resources of user equipment including said transport protocol receiver (Ameigeiras; figure 1, paragraph 15, read as a radio network controller RNC).

Consider **claim 48 and as applied to claim 47 (and similarly applied to claim 56)**. Ameigeiras and Rautiola disclose the step of determining a transport protocol parameter on the basis of said radio resource data (Ameigeiras; see sliding window; paragraph 8).

Consider **claim 49 and as applied to claim 48 (and similarly applied to claim 57)**. Ameigeiras and Rautiola disclose wherein the transport protocol parameter comprises a receiver

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advertised window or a receiver maximum segment size (Ameigeiras; see sliding window; paragraphs 8, 12).

Consider **claim 58 and as applied to claim 57**. Ameigeiras and Rautiola disclose wherein the sender maximum send window is the upper limit for a transport protocol congestion control send window (Ameigeiras; see sliding window; paragraphs 8, 12).

Consider **claim 59 and as applied to claim 58**. Ameigeiras and Rautiola disclose wherein the radio resource data comprises link state information selected from the group consisting of: radio link data rate; round-trip time; block error rate; delay; and packet loss rate (Ameigeiras; paragraphs 6-8, 17).

Consider **claim 60 and as applied to claim 59**. Ameigeiras and Rautiola disclose wherein said method provides dynamic load control (Ameigeiras; paragraph 17).

Consider **claim 63 and as applied to claim 62**. Ameigeiras and Rautiola disclose wherein radio link data rate is determined on the basis of the transferred radio resource data (Ameigeiras; paragraph 17).

Consider **claim 64 and as applied to claim 63**. Ameigeiras and Rautiola disclose wherein the radio resource data is selected from the group consisting of: requested radio link data rate; and data related to data amount of one or more requested data objects (Ameigeiras; paragraph 17).

Consider **claim 65 and as applied to claim 64**. Ameigeiras and Rautiola disclose wherein the transport protocol sender comprises User Equipment (Ameigeiras; figure 1).

Consider **claim 66 and as applied to claim 65**. Ameigeiras and Rautiola disclose wherein the radio network controller controls radio resources of user equipment including the

transport protocol sender (Ameigeiras; figure 1, paragraph 15, read as a radio network controller).

Consider **claim 67 and as applied to claim 66**. Ameigeiras and Rautiola disclose wherein the transport control protocol is the Transport Control Protocol, TCP, used on the Internet (Ameigeiras; paragraph 2).

Claims 50-52 are rejected under 35 USC 103(a) as being unpatentable over **Ameigeiras et al. (US PG PUB 2004/0052234 A1, hereinafter Ameigeiras)** in view of **Rautiola et al. (US Patent 6,853,851 B1, hereinafter Rautiola)** in view of **Aweya (US Patent 7,047,312 B1)** in view of **Applicant's Admitted Prior Art (hereinafter AAPA)** and further in view of **Cuny (US PG PUB 2003/0179720 A1)**.

Consider **claim 50 and as applied to claim 49**. Ameigeiras, Rautiola, Aweya, and AAPA disclose the claimed invention but fail to disclose the step of including the transport protocol parameter in a transport protocol acknowledgement to a transport protocol sender.

However, Cuny discloses the step of including the transport protocol parameter in a transport protocol acknowledgement to a transport protocol sender (abstract, paragraph 24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Cuny into the invention of Ameigeiras, Rautiola, Aweya, and AAPA in order to specify a suitable amount of data for which the sender can transmit to avoid overflow of the buffer at the receiver (paragraph 24)

Consider **claim 51 and as applied to claim 50**. Ameigeiras, Rautiola, and Cuny disclose wherein the transport protocol parameter is a parameter of congestion control in the transport protocol sender (Ameigeiras; paragraph 8).

Consider **claim 52 and as applied to claim 51**. Ameigeiras, Rautiola, and Cuny disclose wherein the transport protocol receiver comprises a User Equipment (Ameigeiras; figure 1).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

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Randolph Building
401 Dulany Street

Alexandria, VA 22314

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098.

The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Christopher M. Brandt

C.M.B./cmb

December 5, 2008

/George Eng/
Supervisory Patent Examiner, Art Unit 2617